

CLAIMS

What is claimed is:

- 1 1. A pre-feeder apparatus for use in guiding and hoisting a sail on a stay of a sailboat, the sail
2 having a luff, comprising a first jaw member for receiving the luff of the sail, a second jaw
3 member opposing the first jaw member, the second jaw member being movable between an open
4 position and a closed position relative to the first jaw member, wherein the first and second jaw
5 members form an opening between them for partially encircling the luff.
- 1 2. The pre-feeder apparatus of claim 1, wherein the first and second jaw members have opposing
2 ends, the opposing ends having a gap therebetween when the jaw members are in the closed
3 position.
- 1 3. The pre-feeder apparatus of claim 2, wherein the gap ranges from about 1 millimeter to about
2 100 millimeters.
- 1 4. The pre-feeder apparatus of claim 2, wherein the opposing ends of the jaw members are
2 disposed at an angle that diverges away from the gap and the opening between the jaw members.
- 1 5. The pre-feeder apparatus of claim 2, further comprising means for adjusting the gap between
2 the first and second jaw members.
- 1 6. The pre-feeder apparatus of claim 5, wherein the adjusting means comprises a screw having a
2 first end, a second end and a threaded portion, the threaded portion being attached to one of the

3 jaw members with the first end being engaged in a receiving device in the remaining jaw
4 member and the second end enabling rotation of the screw about its longitudinal axis.

1 7. The pre-feeder apparatus of claim 1, wherein the first and second jaw members slidably
2 engage the luff in the closed position of the jaw members.

1 8. The pre-feeder apparatus of claim 1, wherein the first and second jaw members have opposing
2 ends comprising a surface designed for contact with the sail.

1 9. The pre-feeder apparatus of claim 8, wherein the contact surface comprises a rounded surface.

1 10. The pre-feeder apparatus of claim 8, wherein the contact surface comprises at least one
2 roller.

1 11. The pre-feeder apparatus of claim 1, further comprising attachment means for attaching the
2 pre-feeder apparatus to the sailboat.

1 12. The pre-feeder apparatus of claim 11, wherein said attachment means comprises an eyelet
2 extending through the first jaw member and a flexible strand looped through the eyelet and
3 knotted.

1 13. The pre-feeder apparatus of claim 12, wherein said attachment means is selected from the
2 group consisting of rope, line, and cable.

1 14. The pre-feeder apparatus of claim 11, wherein said attachment means comprises an arm
2 having a longitudinal axis and being flexibly attached to the pre-feeder apparatus, the arm being
3 rotatable about its longitudinal axis.

1 15. The pre-feeder apparatus of claim 14, wherein said arm comprises at least one articulatable
2 joint.

1 16. The pre-feeder apparatus of claim 11, wherein said attachment means allows the pre-feeder
2 to move relative to the sail.

1 17. The pre-feeder apparatus of claim 11, wherein said attachment means is connected to the
2 sailboat at a location selected from the group consisting of the gunwale, forestay, deck, and
3 cleats.

1 18. The pre-feeder apparatus of claim 1, further comprising a hinge connecting the second jaw
2 member to the first jaw member.

1 19. The pre-feeder apparatus of claim 18, further comprising means for biasing the second jaw
2 member to the closed position.

1 20. The pre-feeder apparatus of claim 19, wherein the biasing means comprises a spring.

1 21. The pre-feeder apparatus of claim 18, further comprising ratchet means for enabling the
2 second jaw member to be urged toward the open position in discrete intervals.

1 22. The pre-feeder apparatus of claim 1, further comprising means for locking the second jaw
2 member in the closed position.

1 23. The pre-feeder apparatus of claim 22, wherein the means for locking the second jaw member
2 in the closed position comprises a cutout in one of the jaw members, a locking pin extending
3 through the jaw members and having a stop thereon for engaging in the cutout, the locking pin
4 being movable between a locked position with the stop engaged in the cutout to retain the jaw
5 members in their closed position and an unlocked position with the stop disengaged from the
6 cutout to permit the second jaw member to be articulated to the open position.

1 24. The pre-feeder apparatus of claim 23, further comprising a groove in the one jaw member,
2 the locking pin passing through the groove and being movably guided in the groove when the
3 stop is disengaged from the cutout and the second jaw member is articulated to the open position.

1 25. The pre-feeder apparatus of claim 23, further comprising a resilient element having a biasing
2 force urging the locking pin to its locked position.

1 26. The pre-feeder apparatus of claim 25, further comprising means for adjusting the biasing
2 force of the resilient element.

1 27. The pre-feeder apparatus of claim 26, wherein the locking pin comprises a threaded screw
2 with a screw head and the resilient element comprises a spring arranged concentrically on the
3 threaded screw between the screw head and one of the jaw members, the adjusting means
4 comprising the threaded screw and a thread in the stop for adjusting the distance between the
5 screw head and the one jaw member.

1 28. The pre-feeder apparatus of claim 27, further comprising a resilient cover enclosing the
2 screw head and resilient element.

1 29. The pre-feeder apparatus of claim 1, further comprising gripping portions on the jaw
2 members for manually gripping the jaw members.

1 30. The pre-feeder apparatus of claim 1, wherein the first and second jaw members are each
2 made of one or more materials selected from the group consisting of Delrin, carbon fiber,
3 titanium, stainless steel, aluminum, and bronze.

1 31. A pre-feeder apparatus for use in guiding and hoisting a sail on a forestay of a sailboat, the
2 sail having a luff, comprising first and second jaw members for receiving the luff of the sail, and
3 a pivot member pivotally connecting the jaw members in opposing relationship, the jaw
4 members being pivotable relative to each other between open and closed positions, the first and
5 second jaw members forming an opening and a gap between them for slidably engaging the luff
6 in the closed position of the jaw members.

1 32. The pre-feeder apparatus of claim 31, further comprising means for biasing the first and
2 second jaw members to the closed position.

1 33. The pre-feeder apparatus of claim 32, wherein the biasing means comprises a spring.

1 34. The pre-feeder apparatus of claim 31, further comprising ratchet means for enabling the jaw
2 members to be urged toward the open position in discrete intervals.

1 35. The apparatus of claim 31, further comprising attachment means for securing the pre-feeder
2 apparatus to the sailboat.

1 36. The pre-feeder apparatus of claim 35, wherein said attachment means comprises an eyelet
2 extending through one of the jaw members and a flexible strand looped through the eyelet and
3 knotted.

1 37. The pre-feeder apparatus of claim 36, wherein said attachment means is selected from the
2 group consisting of rope, line, and cable.

1 38. The pre-feeder apparatus of claim 35, wherein said attachment means comprises an arm
2 having a longitudinal axis and being flexibly attached to the pre-feeder apparatus, the arm being
3 rotatable about its longitudinal axis.

1 39. The pre-feeder apparatus of claim 38, wherein said arm comprises at least one articulatable
2 joint.

1 40. The pre-feeder apparatus of claim 35, wherein said attachment means allows the pre-feeder
2 to move relative to the sail.

1 41. The pre-feeder apparatus of claim 35, wherein said attachment means is connected to the
2 sailboat at a location selected from the group consisting of the gunwale, forestay, deck, and
3 cleats.

1 42. The pre-feeder apparatus of claim 31, further comprising gripping portions on the jaw
2 members for manually gripping the jaw members.

1 43. The pre-feeder apparatus of claim 42, wherein the pivot member is positioned approximately
2 near the center of the pre-feeder and the gripping members being pivotable relative to each other
3 between open and closed positions whereby application of opening force to the gripping portions
4 causes the jaw members to be urged toward the open position and application of closing force to
5 the gripping portions causes the jaw members to be urged toward the closed position.

1 44. The pre-feeder apparatus of claim 31, wherein the gap ranges from about 1 millimeter to
2 about 100 millimeters.

1 45. The pre-feeder apparatus of claim 31, wherein the first and second jaw members have
2 opposing ends disposed at an angle that diverges away from the gap and the opening between the
3 jaw members.

1 46. The pre-feeder apparatus of claim 31, further comprising means for adjusting the gap
2 between the first and second jaw members.

1 47. The pre-feeder apparatus of claim 46, wherein the adjusting means comprises a screw
2 having a first end, a second end and a threaded portion, the threaded portion being attached to
3 one of the jaw members with the first end being engaged in a receiving device in the remaining
4 jaw member and the second end enabling rotation of the screw about its longitudinal axis.

1 48. The pre-feeder apparatus of claim 31, wherein the first and second jaw members are each
2 made of one or more materials selected from the group consisting of Delrin, carbon fiber,
3 titanium, stainless steel, aluminum, and bronze.

1 49. A pre-feeder apparatus for use in guiding and hoisting a sail on a forestay of a sailboat, the
2 sail having a luff, comprising first and second jaw members for receiving the luff of the sail, and
3 a pin parallel to the plane of the pre-feeder connecting the jaw members in opposing relationship,
4 the jaw members being slidable relative to each other between open and closed positions, the
5 first and second jaw members forming an opening and a gap between them for slidably engaging
6 the luff in the closed position of the jaw members.

1 50. The pre-feeder apparatus of claim 49, further comprising means for biasing the first and
2 second jaw members to the closed position.

1 51. The pre-feeder apparatus of claim 50, wherein the biasing means comprises a spring.

1 52. The pre-feeder apparatus of claim 49, further comprising means for locking the jaw
2 members in the closed position.

1 53. The apparatus of claim 49, further comprising attachment means for securing the pre-feeder
2 apparatus to the sailboat.

1 54. The pre-feeder apparatus of claim 49, further comprising gripping portions on the jaw
2 members for manually gripping the jaw members.

1 55. A pre-feeder apparatus for use in guiding and hoisting a sail on a stay of a sailboat, the sail
2 having a luff, comprising first and second jaw members for receiving the luff of the sail, said
3 first and second jaw members forming an opening between them for slidably engaging the luff of
4 the sail when said first and second jaw members are in a closed position, said first jaw member
5 being articulatable relative to the second jaw member between an open position enabling the luff
6 to be inserted into said opening between said first and second jaw members and a closed position
7 holding said luff within said opening.

1 56. The pre-feeder apparatus of claim 55, further comprising means for locking the jaw
2 members in the closed position.

1 57. The pre-feeder apparatus of claim 55, wherein the means for locking the jaw members in the
2 closed position comprises a cutout in one of the jaw members, a locking pin extending through
3 the jaw members and having a stop thereon for engaging in the cutout, the locking pin being
4 movable between a locked position with the stop engaged in the cutout to retain the jaw members
5 in their closed position and an unlocked position with the stop disengaged from the cutout to
6 permit the jaw members to be articulated to their open position.

1 58. The pre-feeder apparatus of claim 57, including a resilient element having a biasing force
2 urging the locking pin to its locked position.

1 59. The pre-feeder apparatus of claim 58, including means for adjusting the biasing force of the
2 resilient element.

1 60. The pre-feeder apparatus of claim 59, wherein the locking pin is a threaded screw with a
2 screw head and the resilient element is a spring arranged concentrically on the threaded screw
3 between the screw head and one of the jaw members, the adjusting means comprising the
4 threaded screw and a thread in the stop for adjusting the distance between the screw head and the
5 one jaw member.

1 61. The pre-feeder apparatus of claim 55, including a hinge connecting the first and second jaw
2 members.

1 62. The pre-feeder apparatus of claim 55, further comprising attachment means for attaching the
2 pre-feeder apparatus to the sailboat.

1 63. The pre-feeder apparatus of claim 55, further comprising gripping portions on the jaw
2 members for manually gripping the jaw members.

1 64. The pre-feeder apparatus of claim 55, further comprising means for biasing the first and
2 second jaw members to the closed position.

1 65. The pre-feeder apparatus of claim 64, wherein the biasing means comprises a spring.